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FLAME PHOTOMETRY AND PHOTOCOLORIMETRIC DETERMINATION OF ELECTROLYTES OF PLASMA OF *CHANNA PUNCTATUS* (BL.) AND *NOTOPTERUS NOTOPTERUS* (HAM)

STUDIES on fish blood are interesting in view of low blood volume 1·5–3·0% (Martin, 1950) and short coagulation time. A few references are available on plasma contents of marine fishes, *viz.*, Mc Cay[4] (1934); Bailey[1] (1957); Oguri asd Takada[5] (1967); Gy. Molnar[3] (1969); Palarios[6] *et al.* (1972), but very little is known about the serum or plasma electrolytes of fresh water teleosts. The notable references on fresh water teleosts are of Siddique and Siddique[7] (1965); Tandon and Joshi[8] (1974) which mainly deal with the seasonal variation of a few constituents. The authors planned a study of the plasma electrolytes of two fresh water fishes *Channa punctatus* (Bl.) and *Notopterus notopterus* (HAM) of different habits and habitats.

The fishes were collected from Hindon river of Ghaziabad and the blood was directly taken from the heart with the help of heparinized syringe with a 20 gouge needle. The blood was immediately centrifuged at 2000 r.p.m. for 5 minutes and the supernatant was separated. The plasma contents like Na, K, were detected by flame photometer while the inorganic phosphorus, iron and calcium were determined by photocolorimeter according to the method of E. J. King and I. D. P. Wootton[2] (1956).

TABLE I

Plasma electrolytes of Channa punctatus *and* Notopterus notopterus

Plasma contents*	*Channa punctatus*	*Notopterus notopterus*
1. Sodium (mg/100 ml)	312·0	298·0
2. Calcium (mg/100 ml)	16·2	15·0
3. Potassium (mg/100 ml)	4·5	5·5
4. Iron (mg/100 ml)	67·2	57 0
5. Inorganic (mg/100 ml) Phosphorus	16·8	15·7

* Mean values.

It is observed that *C. punctatus* which is an active and surface feeding fish has higher plasma contents than that of *N. notopterus*, a mid water feeder and sluggish fisr.

This piece of work has provided clue that the plasma contents may be higher in active and surface feeding fish as compared to the sluggish and bottom sluggish fish.

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